



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,187	12/12/2003	Young-Hoon Ko	764-21	2598

28249 7590 07/13/2005

DILWORTH & BARRESE, LLP
333 EARLE OVINGTON BLVD.
UNIONDALE, NY 11553

EXAMINER

MOORE, MARGARET G

ART UNIT	PAPER NUMBER
----------	--------------

1712

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/735,187

Applicant(s)

KO ET AL.

Examiner

Margaret G. Moore

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 to 15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 to 15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 1712

1. Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. This claim is broader than claim 1 because the tin halide in claim 1 does not embrace tin tetrachloride, as found in claim 4. Note that "n" is 1 to 3, which does not allow for four chloride atoms.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 to 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2001-323068 (as interpreted by the English language translation Ko et al.) in view of Hsu et al.

For each citation noted below, the Examiner relies on the English language equivalent.

JP 2001-323068 teach coupling living polymers with a polysiloxane meeting the Formula 1 in claim 1. See the formula on the bottom of column 2, as well as the particular siloxanes in Examples 1 to 3. These also meet claim 3. These siloxanes are useful as reactants with living polymers. See for instance the teachings starting on the bottom of column 3 through column 4. Also note Examples 5 and 6. These living polymers are prepared in the presence of an organo lithium catalyst, hydrocarbon solvent and Lewis base. This meets the preparation process in claim 1, as well as the requirements of claims 2, 5 to 7, 11 to 14. These polymers are useful in making tires. See column 4, line 19. This reference differs from that claimed in that claimed only in that it does not teach a tin coupling agent meeting Formula 2.

Hsu et al. teach tin coupled elastomers. Under the Background of the Invention Hsu et al. disclose that tin coupled polymers are known to improve various properties

Art Unit: 1712

when used in tires. This establishes what is well known in the art, that it is common to couple elastomers such as those in JP 2001-323068, useful in preparing tires, with tin coupling agents in an effort to obtain the various benefits and properties associated therewith. Column 5, lines 64 and on, teaches that tin coupling agents can include tin trihalides and tin dihalides, meeting Formula 2. The Examiner relies on the teachings of Hsu et al. to exemplify that which is well known in the tire art.

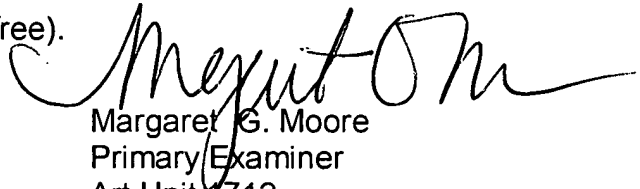
Thus one having ordinary skill in the art would have found it obvious to use both the coupling agent found in JP 2001-323068 as well as a di- or trihalide tin coupling agent as taught in Hsu et al. in an effort to take advantage of the benefits and properties of both. It is prima facie obvious to add a known ingredient to a known composition for its known function. From this, it would have been obvious to add a tin di- or trihalide coupling agent to the coupling elastomers in JP 2001-323068 in an effort to improve the properties thereof, as disclosed by Hsu et al. As such the skilled artisan would have found the instant claims to have been obvious. Adjusting the amount of coupling agent such that the a complete, or operable, elastomer is formed would have been within routine experimentation, thereby rendering obvious claims 9 and 10. Adjusting the amount of each coupling agent in an effort to determine an optimum combination of properties would have been within routine experimentation, as well, rendering obvious claim 8.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday to Wednesday and Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1712

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Margaret G. Moore
Primary Examiner
Art Unit 1712

mgm
7/9/05